



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/589,661	06/08/2000	Richard Louis Arndt	AUS990938US1	9881
35525	7590	07/08/2004	EXAMINER	
IBM CORP (YA) C/O YEE & ASSOCIATES PC P.O. BOX 802333 DALLAS, TX 75380			TANG, KENNETH	
			ART UNIT	PAPER NUMBER
			2127	8

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/589,661

Applicant(s)

ARNDT, RICHARD LOUIS

Examiner

Kenneth Tang

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 25-27, 29 and 30 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2127

### **DETAILED ACTION**

1. This non-final action is in response to the Amendment filed on 4/15/04.
2. Claims 1-10 and 25-30 are presented for examination. Claims 11-24 were cancelled.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 25-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

- a. In claim 25, the term “a hardware resource” (line 6) is indefinite because it is not made explicitly clear in the claim language whether that resource refers to the “resources” or “subsets of resources” (line 3) or neither (completely separate and independent).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2127

**4. Claims 1-3, 5-10, 25-27, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable by Zalewski et al. (hereinafter Zalewski) (US 2002/0016892 A1) in view of Bugnion et al. (hereinafter Bugnion) (US 6,075,938).**

5. As to claim 1, Zalewski teaches a logically partitioned data processing system, comprising:

- a plurality of logical partitions (*see Abstract*);
- a plurality of operating systems, each assigned to a separate one of the plurality of logical partitions (*see Abstract*);
- a plurality of assignable resources, wherein each of the plurality of assignable resources is assigned to one of the plurality of logical partitions ([0008]);

Zalewski teaches a hypervisor assigning shared resources which are logically (virtually) assigned to partitions ([0007]-[0008] and [0018]) but fails to explicitly teach that the hypervisor emulates shared resources and provides a virtual copy of the shared resources to each of the plurality of logical partitions. However, Bugnion teaches emulating shared resources and providing a virtual copy of the shared resources to the partitions (*col. 7, lines 6-12 and lines 43-46*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of emulating shared resources and providing a virtual copy of the shared resources to the partitions in order to share major data structures so that memory overhead can be reduced (*see Abstract and col. 7, lines 38-48*).

Art Unit: 2127

6. As to claim 2, Zalewski teaches the logically partitioned data processing system as recited in claim 1, wherein the shared resources comprise an operator panel ([0037]).

7. As to claim 3, Zalewski teaches the logically partitioned data processing system as recited in claim 1, wherein the shared resources comprise a system console ([0037]).

8. As to claim 5, Zalewski teaches the logically partitioned data processing system as recited in claim 1, wherein instructions for executing the hypervisor are contained within firmware ([0007] and [0059]).

9. As to claims 6-10, Zalewski teaches the logically partitioned data processing system having firmware that comprises of memory. By definition, firmware is a combination of software and hardware. ROMs, PROMs and EPROMs that have data or programs recorded on them are firmware. Zalewski fails to state that the firmware comprises of a read-only memory, a programmable read-only memory, an erasable programmable read-only memory, an electrically erasable programmable read-only memory, and a non-volatile random access memory. However, it is well known to one of ordinary skill in the art that firmware comprises of ROMs, PROMs, EPROMs, and EEPROMs, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature to the existing system of Zalewski and Bugnion in order to improve the control and flexibility of data storage for the system.

Art Unit: 2127

10. As to claim 25, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Zalewski teaches assigning non-overlapping subsets of resources to one of a plurality of partitions ([0005], [0143], and [0257]).

11. As to claim 26, Bugnion teaches wherein the step of emulating further comprises providing an interface to the hardware resource as an emulated port device driver (*col. 11, lines 32-42*).

12. As to claim 27, it is rejected for the same reasons as stated in the rejection of claim 1.

13. As to claim 29, it is rejected for the same reasons as stated in the rejection of claim 5.

14. As to claim 30, it is rejected for the same reasons as stated in the rejection of claims 5 and 26.

***Allowable Subject Matter***

15. Claim 4 is allowed.

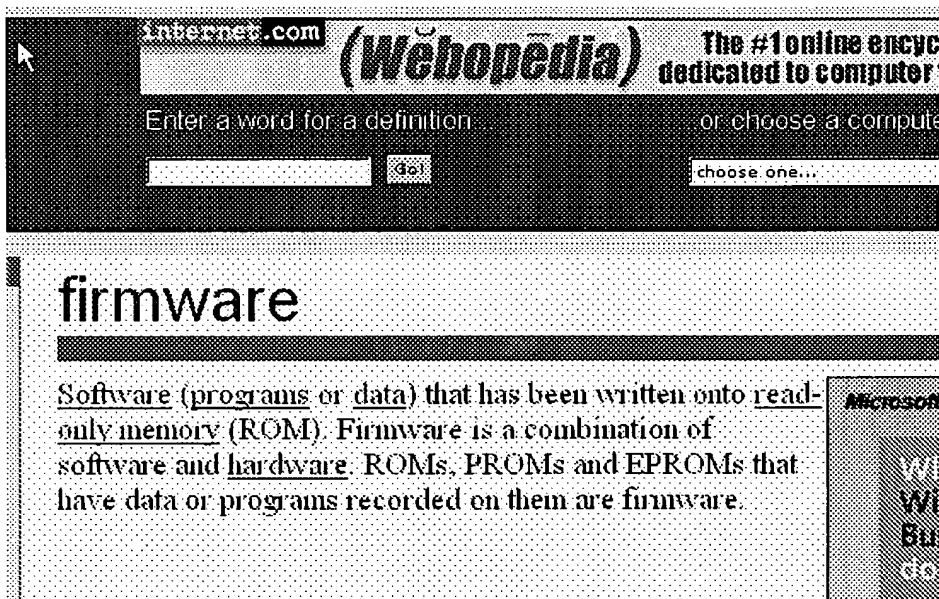
16. Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2127

### *Response to Arguments*

17. Applicant's arguments with respect to claims 1-3 and 5 have been considered but are moot in view of the new ground(s) of rejection.

18. Applicant's arguments with respect to claims 6-10 are in moot in view of the new grounds of rejection. Furthermore, the standard well-known definition of the term firmware given by the website of Webopedia shows the following:



### *Conclusion*

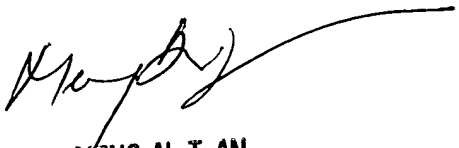
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 8:30AM - 7:00PM, Monday through Thursday.

Art Unit: 2127

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt  
6/25/04



MENG-AL T. AN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100